

LISTING OF CLAIMS

We claim:

1. (Previously presented) A process for the joint preparation of
 - (i) formic acid (III);
 - (ii) a carboxylic acid having at least two carbon atoms (II) and/or derivatives thereof;
and
 - (iii) a carboxylic anhydride (VII);
said process comprising:
 - (a) transesterifying a formic ester (I) with a carboxylic acid having at least two carbon atoms (II) to form formic acid (III) and the corresponding carboxylic ester (IV);
 - (b) carbonylating at least part of the carboxylic ester (IV) formed in step (a) to form the corresponding carboxylic anhydride (V); and
 - (c) transanhydriding at least part of the carboxylic anhydride (V) formed in step (b) with a carboxylic acid (VI) to form a carboxylic anhydride (VII) and the carboxylic acid (II).
2. (Previously Presented) The process according to claim 1, wherein
 - (d) at least part of the carboxylic acid (II) formed in step (c) is recirculated to step (a).
3. (Previously Presented) The process according to claim 1, wherein the transanhydridation in step (c) is carried out in the presence of an acidic or basic ion exchanger or an acidic or basic oxide.
4. (Previously Presented) The process according to claim 1, wherein the transanhydridation in step (c) is carried out in the presence of an organic or inorganic acid which has a pK_a which is lower than that of the carboxylic acid (VI) and the carboxylic acid (II).
5. (Previously Presented) The process according to claim 1, wherein the transanhydridation in step (c) is carried out in the presence of a metal ion from groups 1 to 13 of the Periodic Table.

6. (Previously Presented) The process according to claim 1, wherein the transanhydridation in step (c) is carried out in a continuously operated distillation column and the reaction products carboxylic acid (II) and carboxylic anhydride (VII) formed are continuously taken off.

7. (Previously Presented) The process according to claim 1, wherein the formic ester (I) used is methyl formate.

8. (Previously Presented) The process according to claim 1, wherein the carboxylic acid (II) used is acetic acid.

9. (Previously Presented) The process according to claim 1, wherein the carboxylic anhydride (VII) prepared is at least one carboxylic anhydride (VII) selected from the group consisting of propionic anhydride, butyric anhydride, acrylic anhydride, methacrylic anhydride and benzene-1,2,4,5-tetracarboxylic dianhydride.

10. (Previously Presented) The process according to claim 1, wherein

- (i) formic acid (III) is prepared;
- (ii) the carboxylic acid having at least two carbon atoms (II) and derivatives thereof prepared is at least one carboxylic acid selected from the group consisting of acetic acid, methyl acetate and acetic anhydride; and
- (iii) the carboxylic anhydride (VII) prepared is at least one carboxylic anhydride (VII) selected from the group consisting of propionic anhydride, butyric anhydride, acrylic anhydride, methacrylic anhydride and benzene-1,2,4,5-tetracarboxylic dianhydride.

11. (Previously Presented) The process according to claim 2, wherein the transanhydridation in step (c) is carried out in the presence of an acidic or basic ion exchanger or an acidic or basic oxide.

12. (Previously Presented) The process according to claim 2, wherein the transanhydridation in step (c) is carried out in the presence of an organic or inorganic acid which has a pK_a which is lower than that of the carboxylic acid (VI) and the carboxylic acid (II).

13. (Previously Presented) The process according to claim 2, wherein the transanhydridation in step (c) is carried out in the presence of a metal ion from groups 1 to 13 of the Periodic Table.

14. (Previously Presented) The process according to claim 2, wherein the transanhydridation in step (c) is carried out in a continuously operated distillation column and the reaction products carboxylic acid (II) and carboxylic anhydride (VII) formed are continuously taken off.

15. (Previously Presented) The process according to claim 3, wherein the transanhydridation in step (c) is carried out in a continuously operated distillation column and the reaction products carboxylic acid (II) and carboxylic anhydride (VII) formed are continuously taken off.

16. (Previously Presented) The process according to claim 4, wherein the transanhydridation in step (c) is carried out in a continuously operated distillation column and the reaction products carboxylic acid (II) and carboxylic anhydride (VII) formed are continuously taken off.

17. (Previously Presented) The process according to claim 5, wherein the transanhydridation in step (c) is carried out in a continuously operated distillation column and the reaction products carboxylic acid (II) and carboxylic anhydride (VII) formed are continuously taken off.

18. (Previously Presented) The process according to claim 2, wherein the carboxylic acid (II) used is acetic acid.

19. (Previously Presented) The process according to claim 3, wherein the carboxylic acid (II) used is acetic acid.

20. (Previously Presented) The process according to claim 4, wherein the carboxylic acid (II) used is acetic acid.